National Institute of Environmental Health Sciences

# Chronic kidney disease of unknown etiology: A disease related to global warming?

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**Abstract:**

In recent years, Central America, Egypt, India and Sri Lanka have reported a high prevalence of chronic kidney disease of unknown etiology in agricultural communities, predominantly among male farmworkers. This essay examines the disease's case definitions, epidemiology (disease burden, demographics, associated risk factors) and causal hypotheses, by reviewing published findings from El Salvador, Nicaragua, Costa Rica, Sri Lanka, Egypt and India. The range of confirmed chronic kidney disease prevalence was 17.9%–21.1%. Prevalence of reduced glomerular filtration (< 60 mL/min/1.73 m2 body surface area) based on a single serum creatinine measurement was 0%–67% men and 0%–57% women. Prevalence was generally higher in male farmworkers aged 20–50 years, and varied by community economic activity and altitude. Cause was unknown in 57.4%–66.7% of patients. The dominant histopathological diagnosis was chronic tubulointerstitial nephritis. Associations were reported with agricultural work, agrochemical exposure, dehydration, hypertension, homemade alcohol use and family history of chronic kidney disease. There is no strong evidence for a single cause, and multiple environmental, occupational and social factors are probably involved. Further etiological research is needed, plus interventions to reduce preventable risk factors.

**Source:** http://www.medicc.org/mediccreview/index.php?issueEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)28&idEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)349&aEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)vahtml

## Resource Description

**Exposure :**

weather or climate related pathway by which climate change affects health

Food/Water Security, Temperature

**Temperature:** Extreme Heat

**Geographic Feature:**

resource focuses on specific type of geography

None or Unspecified

**Geographic Location:** ☑

resource focuses on specific location

Global or Unspecified

**Health Impact:** ☑

specification of health effect or disease related to climate change exposure

Urologic Effect, Other Health Impact

**Other Health Impact:** dehydration

**Population of Concern:** A focus of content

**Population of Concern:** ☑

populations at particular risk or vulnerability to climate change impacts

Workers

**Resource Type:** ☑

format or standard characteristic of resource

Policy/Opinion

**Timescale:** ☑

time period studied

Time Scale Unspecified